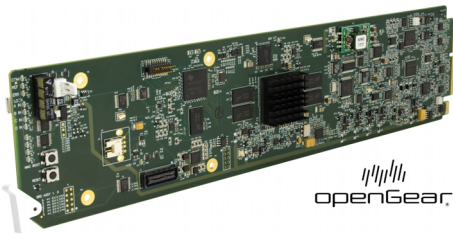


# 9971-MV6-4K • 12G/6G/3G/HD/SD UHD Multiviewers



The Cobalt® **9971-MV6-4K 12G/6G/3G/HD/SD UHD Multiviewers** suite is Cobalt's next generation of advanced UHD high-capacity channel multiviewers for the openGear® platform. Full-flexibility design accommodates 12G/6G/3G/HD/SD-SDI and UHD1 3840x2160 Square Division (SDQS) or Two-Sample Interleave (2SI) quad 3G-SDI based formats as I/O, and can output ST 2082 12G-SDI for single-wire 4K transport. Using 12G-SDI "single-wire" inputs, up to 6 discrete PIP images can be supported. With both 12G-SDI and quad 3G-SDI inputs, the 9971-MV6-4K can downconvert 12G and quad UHD. The **9971-MV6-4H-4K** model directly works with commercial/consumer HDMI signals as both inputs and outputs without any video converter boxes being required. All 9971-MV6-4K models provide up to two HDMI 2.0 outputs for economical 4K video monitoring.

The 9971-MV6-4K suite offers unprecedented ease of setup and also offers an unprecedented ease of use. Fully-flexible layouts using any of several one-button template presets or fully customizable layouts using easy to use sizing/positioning custom controls. Any template layout or custom layout changes can be done "on-the-fly" in real time, without

tedious setup or layout programs like many other multiviewer products. Graphical overlay features include user text "burn-in" insertions that can correlate the images displayed with contextual information. Numerous one-button preset layout formats are available, as well as custom layouts as desired. Custom layout and configuration settings can be saved to user presets, allowing the custom settings to be recalled with one click.

The high-density openGear® design allows for up to five 9971-MV6-4K cards to be installed in one 2RU openGear® frame. Card control/monitoring is available via DashBoard user interface or Cobalt's RESTful-based Reflex protocol.

### 9971-MV6-4K Models:

**9971-MV6-4K** 12G/6G/3G/HD/SD UHD Multiviewer with Six SDI Inputs

**9971-MV6-4H-4K** 12G/6G/3G/HD/SD UHD Multiviewer with Six SDI Inputs and Four HDMI 2.0 Inputs

### FEATURES

High-density openGear comprehensive UHD multiviewer solution

Allows easy, real-time "on the fly" custom layout changes without needing setup or layout programs

Supports Square Division (SDQS) and Two-Sample Interleave (2SI) quad UHD formats

UHD 3840x2160 output raster support

Easy to configure PIP sizing and borders

PIP Identity Text, Video Format, Closed Captioning, Clock burn-ins. LTC burn-in from discrete external RS-485 or per-PIP VBI-based ATC\_LTC or ATC\_VITC timecode. User graphic overlay import.

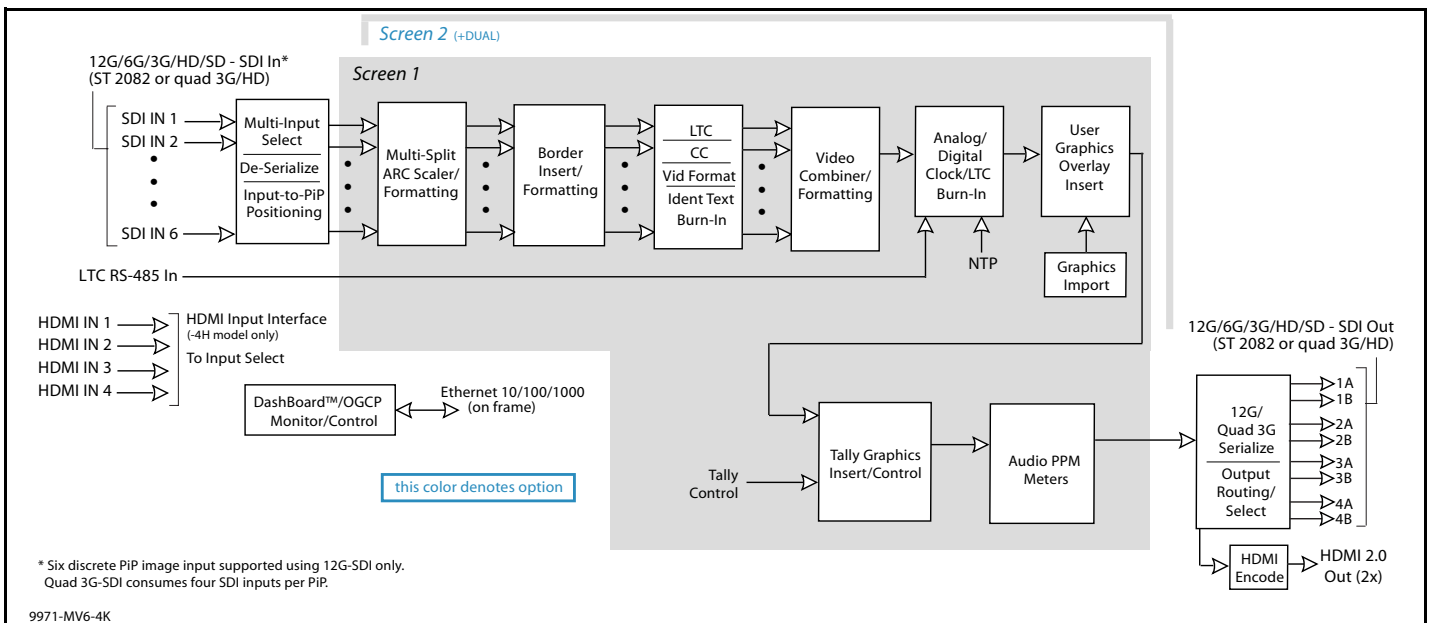
Remote control/monitoring via Dashboard™ software, OGCP-9000 remote control panels, or Cobalt's RESTful-based Reflex protocol

Five year warranty

### OPTIONS

**Dual Screen Option (+DUAL)** - Enables dual head output to drive multiple monitors with different layouts. The input and output crosspoints are shared with the two independent screen processors. All functions and layout choices are independently available for both screen processors.

**Quality Check (+QC)** - Provides failover, alert, or user presets action on criteria such as black/frozen frame, audio silence, and CC absence. This alert can additionally be a user automation trigger via device GPO. **Per-card** license; provides +QC function for **all 6** input channels.



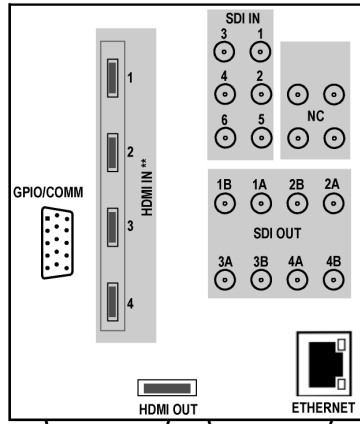
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## COMM / GPIO PINOUTS

- 1 - \*COM A\_RX2 / 422(+)
- 2 - \*COM A\_TX2 / 422(+)
- 3 - COM B\_RX2 / 422(+)
- 4 - GPO OUT1
- 5 - GND
- 6 - \*COM A\_RX1 / 422(-)
- 7 - \*COM A\_TX1 / 422(-)
- 8 - COM B\_RX1 / 422(-)
- 9 - GPI IN5 / GPO OUT 2
- 10 - GPI IN4
- 11 - GPI IN1
- 12 - GPI IN2
- 13 - GPI IN3
- 14 - NC
- 15 - NC

\* Port can be GUI-configured as two RS-232 ports (Tx and Rx), or as a full-duplex RS-422 port.

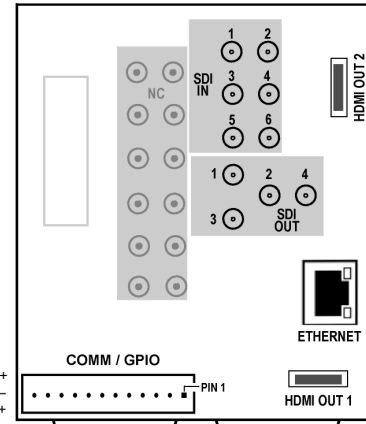
\*\* HDMI inputs applicable to model -MV6-4H-4K only. HDMI connectors are mounted on card assembly and project through opening on rear module.



**RM20-9971-B-HDBNC**

## GPIO/COMM

- 1 - GPI IN 1
- 2 - GPI IN 2
- 3 - GPI IN 3
- 4 - GPI IN 4
- 5 - GPI IN 5
- 6 - GPI IN 6
- 7 - GND
- 8 - GND
- 9 - COMM A RX1/-
- 10 - COMM A RX2/+
- 11 - COMM A TX1/-
- 12 - COMM A TX2/+



**RM20-9971-C-HDBNC**

## SPECIFICATIONS

### 12G/6G/3G/HD/SD-SDI Inputs/Outputs

(6) 75Ω inputs (max)

(8) 75Ω outputs (max)

SDI Formats Supported: SMPTE ST2082-1, ST2082-10, 424M, 292M, SMPTE 259M-C. All inputs/outputs 12G compliant and SDQS/2SI quad 3G compliant.

Return Loss:

- > 15 dB up to 1.485 GHz
- > 10 dB up to 3 GHz
- > 7 dB up to 6 GHz
- > 5 dB up to 12 GHz

Input Cable Length:

- 60m Belden 1694A cable at 11.88 Gbps
- 120m Belden 1694A cable at 2.97 Gbps
- 240m Belden 1694A cable at 1.485 Gbps
- 400m Belden 1694A cable at 270 Mbps

Output Signal Level: 800 mV ± 10%

DC Offset: 0 V ± 50 mV

Rise and Fall Time @ 11.88 Gbps: < 45 ps

Alignment Jitter (12G/3G/HD/SD): < 0.3/0.3/0.2/0.2 UI

### HDMI Inputs (model 9971-MV6-4H-4K only)

(4) HDMI 2.0; type C-mini connector

### HDMI Output

(2, max) HDMI 2.0 Output; type A standard connector

### On-Screen Graphics Burn-In

Tally, PiP Identity Text (entered via UI), per-PIP video format, CC, Clock, LTC burn-in from discrete external RS-485 or per-PIP VBI-based ATC\_LTC or ATC\_VITC timecode. User graphic overlay import.

## ORDERING INFORMATION

**9971-MV6-4K** 12G/6G/3G/HD/SD UHD Multiviewer with Six SDI Inputs

**9971-MV6-4H-4K** 12G/6G/3G/HD/SD UHD Multiviewer with Six SDI Inputs and Four HDMI 2.0 Inputs

**+DUAL** Dual Screen Option

**+QC** Quality Check Option. (**Per-card** license; provides +QC function for **all** 6 input channels.)

**RM20-9971-B-HDBNC** 20-Slot Frame Rear I/O Module (Double-Width) (6) 12G/6G/3G/HD/SD/SD-SDI Inputs, (8) 12G/6G/3G/HD/SD/SD-SDI Processed Outputs, GPIO/COMM (HD-15 connector), HDMI 2.0 Output (type A standard), 10/100/1000 BaseT Ethernet Port (All coaxial connectors HD-BNC.)

**Note:** RM20-9971-B rear module, when fitted to model 9971-MV6-4H-4K has four (4) HDMI inputs (type C mini). These inputs reside on the card assembly and project through a cutout on the rear module. The connectors are **not** part of the rear module assembly.

**RM20-9971-C-HDBNC** 20-Slot Frame Rear I/O Module (Double-Width) (6) 12G/6G/3G/HD/SD/SD-SDI Inputs, (4) 12G/6G/3G/HD/SD/SD-SDI Processed Outputs, GPIO/COMM, (2) HDMI 2.0 Output (type A standard), 10/100/1000 BaseT Ethernet Port (All coaxial connectors HD-BNC.)